

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of

Wayne K. Pfaff

Reissue of Patent No. 5,611,705

Filed: February 1, 1995

Issued: March 18, 1997

For: Mounting Apparatus For Ball Grid Array Device

DECLARATION

I, Wayne K. Pfaff, the above-named Reissue Applicant, hereby state as follows:

I am a citizen of the United States of America and reside at 309 Steeplechase Drive, Irving, Texas 75062.

I verily believe that I am the original, first and sole inventor of the subject matter which is claimed and for which patent is sought in the attached Continuation Application for Reissue entitled Mounting Apparatus For Ball Grid Array Device.

I verily believe that United States Letters Patent No. 5,611,705 granted to me on March 18, 1997, as inventor and applicant and offered to be surrendered with the Renewed Petition for Reissue filed herewith is partially inoperative by reason of the patentee having claimed more or less than he had a right to claim in the patent and that such insufficiency consists particularly of the failure of the patentee to prosecute and obtain claims commensurate with the scope of proposed Claims 23-45.

In the continuation of reissue application submitted herewith, Reissue Applicant proposes to amend the specification and issued claims to correct grammatical and

typographical errors and to more consistently refer to the terminal balls as "terminal balls" rather than "ball terminals".

The proposed changes to the specification note that the embodiment of Fig. 1A shows each terminal ball depending into an individual window 23 in the surface 24 of the support plate. The embodiment of Figs 2, 3, 6 and 7 shows one large window 23 into which all the terminal balls depend. Whether the terminal balls depend into a single window (as shown in Figs 2, 3, 6 and 7) or individual windows (as shown in Fig. 1A) is not relevant to the invention. As shown by Figs 2, 3, 6 and 7 the invention contemplated sockets having a window 23 in the support surface 24 into which one or more terminal balls could depend.

Proposed Claim 23 is essentially identical to issued Claim 1 except that the support face of the support member has been defined in terms of structure as well as function. Likewise, proposed Claims 24-31 (variously dependent from Claim 23) are essentially identical to Claims 2-9 (dependent from Claim 1) except for the amendments to the base claim and the formal corrections discussed above.

Proposed Claim 32 is essentially identical to issued Claim 10 except that the support face of the support member has been defined in terms of structure as well as function. Likewise, proposed Claims 33 and 34 (dependent from Claim 32) are essentially identical to issued Claims 11 and 12 (dependent from Claim 10) except for the amendments to the base claim and the formal corrections discussed above.

Proposed Claim 35 is essentially identical to issued Claim 13 except that the support face of the support member has been defined in terms of structure as well as function. Likewise, proposed Claims 36-42 (all variously dependent from Claim 35)

are essentially identical to issued Claims 14-20 (dependent from Claim 13) except for the amendments to the base claim and the formal corrections discussed above.

Proposed Claim 43 is essentially identical to issued Claim 21 (as amended) except that the support face of the support member has been defined in terms of structure as well as function.

Proposed Claim 44 is essentially identical to issued Claim 22 (as amended) except that the support face of the support member has been defined in terms of structure as well as function.

Proposed Claim 45 presents as the unique contact structure in Jepson form with the entire structure of the mounting apparatus except the contact finger set forth in the preamble since the essence of the invention resides in structure which contacts the terminal ball above its centerline.

Claims 1-22, as issued, could be interpreted to unduly and unnecessarily limit claim coverage to mounting structures in which the support member has support face defining a plurality of windows. The invention disclosed, however, is directed to methods and apparatus for mounting a ball grid array device in a test mounting so that the ball grid array device is supported on a support face with the terminal balls projecting through the support face and into the support member. It is immaterial to the invention whether each ball projects into an individual window or all balls project into the same window. The support face need only support one face of the ball grid array device with its terminal balls depending downwardly into the support member to be contacted by the free ends of the contact members. The particular physical configuration of the window or windows defined by the support face is irrelevant to the subject matter of the invention. Thus claim coverage limited to use of the invention in

connection with a support member which has a support face defining a plurality of windows unduly and unnecessarily deprives the patentee of the full scope of patent protection to which he is entitled for the invention disclosed.

The limitations regarding the specific window configuration of the support face which appears in issued Claims 1-22 and which Reissue Applicant seeks to correct by addition of proposed Claims 23-44 appeared in the claims originally filed in the application which matured into United States Letters Patent No. 5,611,705. The original Claims 1-22, except for minor changes, appear as issued Claims 1-22, respectively.

As noted above, the invention disclosed relates to apparatus and methods for mounting a ball grid array device in a test socket. Even though the window configuration in the support face is irrelevant to the invention, the patentee's attorney, in drafting issued Claims 1-22, inadvertently and unnecessarily included in the claims the specific configuration of the embodiment shown in Fig. 1A. This description was inadvertently and unnecessarily included in the claims by mistake and unnecessarily limits the scope of patent protection.

Subsequent to filing the original application and subsequent to issue of United States Letters Patent No. 5,611,705, Reissue Applicant began manufacture of test sockets as shown and described in the specification of United States Letters Patent No. 5,611,705. The support members in these test sockets employ a support face which defines a single window through which all the terminal balls project as shown in Figs. 2, 3, 6 and 7. In reviewing these structures with Reissue Applicant's counsel for patent marking purposes, counsel noted that the issued claims included the unnecessary

requirement of a support face which defines multiple windows and that such claims, as issued, do not clearly provide patent protection for the invention disclosed.

The foregoing errors arose without any deceptive intention on the part of the Applicant and all errors being corrected in the reissue application up to the time of filing of this Declaration arose without any deceptive intention on the part of the Applicant.

I hereby state that I have reviewed and understand the contents of the above-identified specification and claims as amended by any amendment specifically referred to in this Declaration.

I hereby acknowledge the duty to disclose information of which I am aware and which is material to the examination of this application. I am not aware of any prior art relevant to patentability not previously considered by the United States Patent and Trademark Office which might cause the examiner to deem the original patent wholly or partially inoperative.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.


Wayne K. Pfaff

Date: 11.13.00

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of Wayne K. Pfaff

Serial No.:

Filed:

For: Mounting Apparatus for Ball Grid Array Device

FILE COPY

DECLARATION CLAIMING SMALL ENTITY STATUS - INDEPENDENT INVENTOR

As a below named inventor, I hereby declare that I qualify as an independent inventor as defined in 37 CFR 1.9 (c) for purposes of paying reduced fees to the Patent and Trademark Office under Section 41(a) and (b) of Title 35, United States Code, with regard to the invention described in the specification filed herewith and identified above.

I have not assigned, granted, conveyed or licensed and am under no obligation under contract or law to assign, grant, convey or license any rights in the invention to any person who could not be classified as an independent inventor under 37 CFR 1.9(c) if that person had made the invention, or to any concern which would not qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e).

Each person, concern or organization to which I have assigned, granted, conveyed or licensed or am under obligation under contract or law to assign, grant, convey or license any rights in the invention is listed below.

NAME: _____ [] Individual
ADDRESS: _____ [] Small Business Concern
_____ [] Nonprofit Organization

I acknowledge the duty to file in this application or patent notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this declaration is directed.

Wayne K. Pfaff
NAME OF INVENTOR

NAME OF INVENTOR

NAME OF INVENTOR

Wayne K. Pfaff
Inventor's Signature

Inventor's Signature

Inventor's Signature

Date

Date

Date

1-27-95